

Recycling on rise thanks to more convenient processing at Avon plant



GARY HIGGINS/The Patriot Ledger

Recycling operations at the Waste Management plant in Avon. Recyclables after being compressed into blocks.

TRANSFORMATION

Once the following types of items are sent through the single-stream process, they are broken down into raw materials and made into something else. Here are some examples of what items left at the curbside can become.

- Cardboard becomes other, lighter paper.
- Mixed colored paper such as office and printer paper becomes box board. (That's what cereal boxes are made of.)
- Newspaper becomes more newspaper.*\
- Opaque plastic containers, such as milk jugs, become colored plastic containers, such as detergent bottles.
- Colored plastic containers, such as detergent bottles, become other dyed plastic items, such as car bumpers.
- Clear plastic containers, such as water and soda bottles, become fabric that might be used to make carpeting.
- Tin cans become lower-end metals, such as rebar used in construction.
- Aluminum cans become other aluminum cans.
- Glass containers become other glass containers.

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Source: Waste Management

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AVON —

All around the South Shore, people are recycling – albeit to widely different degrees and in very different ways.

The two main methods of recycling here are single-stream and “pay-as-you-throw.”

The former aims to maximize recycling by making it easier. People can put all their recyclables in one place – sorting is not required.

The latter speaks to people's wallets: Getting rid of recyclables is free, but the bags for disposal of trash must be purchased.

Braintree, Quincy and Weymouth have seen their recycling tonnage jump 12 percent (from July 2008 to July 2009) and their trash volume drop 8 percent since they merged their trash programs. The cost savings in Quincy alone was \$310,425.

"Just by making it easier for people to recycle, the trash tonnage decreases and the recycling tonnage increases," said John Sullivan, who oversees the recycling program for Quincy's public works department.

The South Shore's single-stream recycling movement began in January 2008 when Waste Management switched its Avon plant away from dual-stream recycling, in which people separate recyclables at the curbside.

While single-stream plants are about 75 percent more expensive to build than dual-stream plants, there are long-term savings thanks to greater plant capacity and a less labor-intensive operation, said Robert Comi, New England recycling operations director for Waste Management.

The Avon plant is the only single-stream recycling facility in New England. Recyclables totaling about 10,000 tons are sorted and cleaned there each month.

Waste Management is trying to increase its Avon production by signing up more communities for single-stream recycling. But towns such as Milton, Scituate and Hingham prefer the pay-as-you-throw approach. They figure the cost of trash bags will induce people to recycle.

Marshfield saw a 37 percent reduction in trash and a 42 percent increase in recycling after it converted to pay-as-you-throw in 2007.

"That was when recycling really jumped off for Marshfield," said David Carriere, the town's public works superintendent.

Convenience and efficiency are keys to the success of single-stream recycling, said Rosemary Nolan, who helped establish the Braintree-Quincy-Weymouth trash/recycling alliance. Haulers can use compactor trucks instead of trucks with separate compartments for various types of recyclables.

Because the capacity of compactor trucks is 30 percent greater, the haulers make fewer trips to dump their loads, and the towns save money thanks to the efficiency, Nolan said.

"The residents have had so many compliments about single-stream," she said. "The convenience of it, people have really embraced it."

Advocates say recycling – whatever methods are used – is vital to the future of the area, and of the Earth itself.

"It is part of the whole mix of reducing greenhouse-gas emissions and improving energy efficiency," said Ben Cowie-Haskell, president of Sustainable Marshfield. "It improves quality of life and reduces our impact on the environment."

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HOW SINGLE-STREAM WORKS

Waste Management's single-stream recycling plant takes your discarded items and separates them so they can be made into something new. Here are the steps in the process:

- 1. You put your recyclables at the curb or take them to a recycling center or transfer station.**
- 2. Recyclables left at the curb are picked up by a hauler and trucked to the Avon plant.**

3. Everything is loaded onto a conveyor, along which workers do the needed sorting. They remove non-recyclable items and things that would be harmful to the plant's moving parts, like wires.
4. Cardboard is separated out first, by rotating blades. Everything else falls onto a separate conveyor.
5. Newspapers and mixed paper are separated by an inclined shaker, which drops all containers onto another conveyor.
6. Newspapers are separated from mixed paper using a star screen.
7. A magnet separates metal containers from plastic and glass containers.
8. A shaker screen removes anything smaller than 1.25 inches, such as broken glass and torn paper.
9. A blower separates the plastic from glass containers.
10. Plastic containers are separated into three categories using an optical sorter.
11. Workers sift through remaining items to see if anything was missed in the process.
12. The separated materials are sold to mills, and there broken down into raw materials.
13. The raw materials are processed to produce new things. Your mug jug can become your laundry detergent bottle; today's newspaper can become next month's newspaper.

Source: Waste Management